

# t59\_rewrite2 (TMd- mqNZF9e6JztrEJA vB1QXtoQXHsqwyBU7)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $r4\_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & \quad (k8\_afinsq\_1 X0) (k8\_afinsq\_1 X0)))) \Rightarrow (\forall X2. (m1\_subset\_1 \\
 & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k8\_afinsq\_1 X0) (k8\_afinsq\_1 X0)))) \Rightarrow \\
 & \quad (\forall X3. (m1\_subset\_1 X3 (k8\_afinsq\_1 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 \\
 & \quad X4 (k8\_afinsq\_1 X0)) \Rightarrow (((r4\_rewrite2 X0 X1 X2 X3) \wedge (r1\_rewrite1 \\
 & (k7\_rewrite2 X0 (k4\_subset\_1 (k2\_zfmisc\_1 (k8\_afinsq\_1 X0) (k8\_afinsq\_1 \\
 & X0)) X1 X2)) X3 X4)) \Rightarrow (r1\_rewrite1 (k7\_rewrite2 X0 X1) X3 X4))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
 & X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (m1\_subset\_1 (k4\_subset\_1 \\
 & \quad X0 X1 X2) (k1\_zfmisc\_1 X0))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & \quad (k8\_afinsq\_1 X0) (k8\_afinsq\_1 X0)))) \Rightarrow (\forall X2. (m1\_subset\_1 \\
 & X2 (k8\_afinsq\_1 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k8\_afinsq\_1 \\
 & X0)) \Rightarrow ((r3\_rewrite2 X0 X1 X2 X3) \Leftrightarrow (r1\_rewrite1 (k7\_rewrite2 X0 X1) \\
 & \quad X2 X3))))))
 \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & \quad (k8\_afinsq\_1 X0) (k8\_afinsq\_1 X0)))) \Rightarrow (\forall X2. (m1\_subset\_1 \\ X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k8\_afinsq\_1 X0) (k8\_afinsq\_1 X0)))) \Rightarrow \\ & \quad (\forall X3. (m1\_subset\_1 X3 (k8\_afinsq\_1 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 \\ X4 (k8\_afinsq\_1 X0)) \Rightarrow (((r4\_rewrite2 X0 X1 X2 X3) \wedge (r3\_rewrite2 \\ X0 (k4\_subset\_1 (k2\_zfmisc\_1 (k8\_afinsq\_1 X0) (k8\_afinsq\_1 X0)) \\ X1 X2) X3 X4)) \Rightarrow (r3\_rewrite2 X0 X1 X3 X4)))))) \end{aligned}$$